

TRICKLE DRAIN DESIGN TABLE						
TRICKLE DRAIN LOCATION ID						
(A)	DRAIN PIPE INVERT ELEVATION (FEET)					
(B)	OUTLET PIPE INVERT ELEVATION (FEET)					
(C)	BOTTOM OF DRAIN TRENCH ELEVATION (FEET)					
(D)	TOP OF DRAIN ROCK ELEVATION (FEET)					
TRICKLE DRAIN PIPE					TOTAL LENGTH (FEET)	DIAMETER (INCHES)
(E)	DRAIN PIPE				20	
(F)	OUTLET PIPE	(F1)	(F2)	(F3)		

CONSTRUCTION REQUIREMENTS

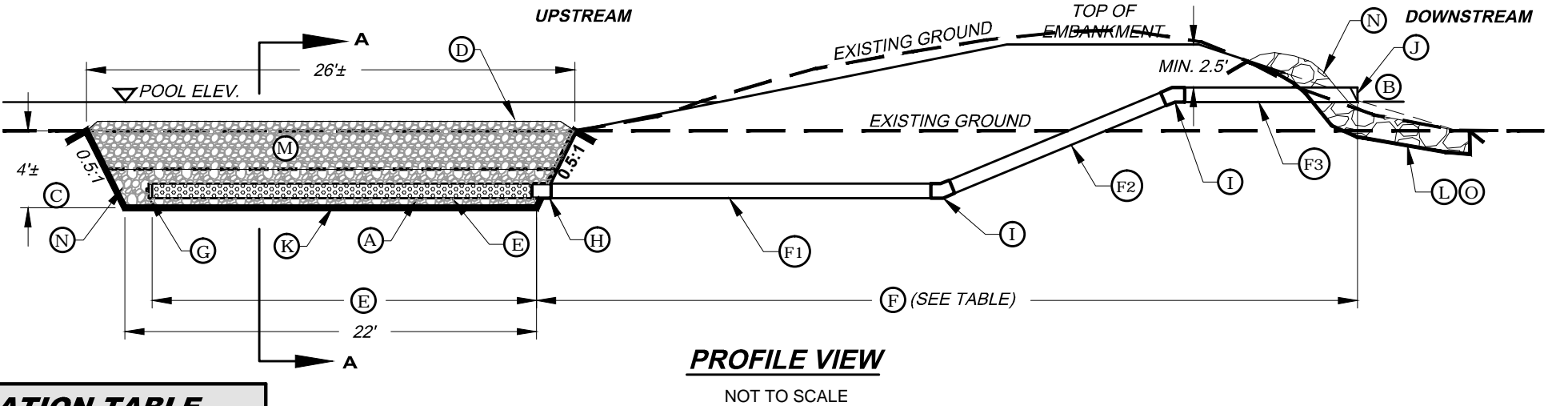
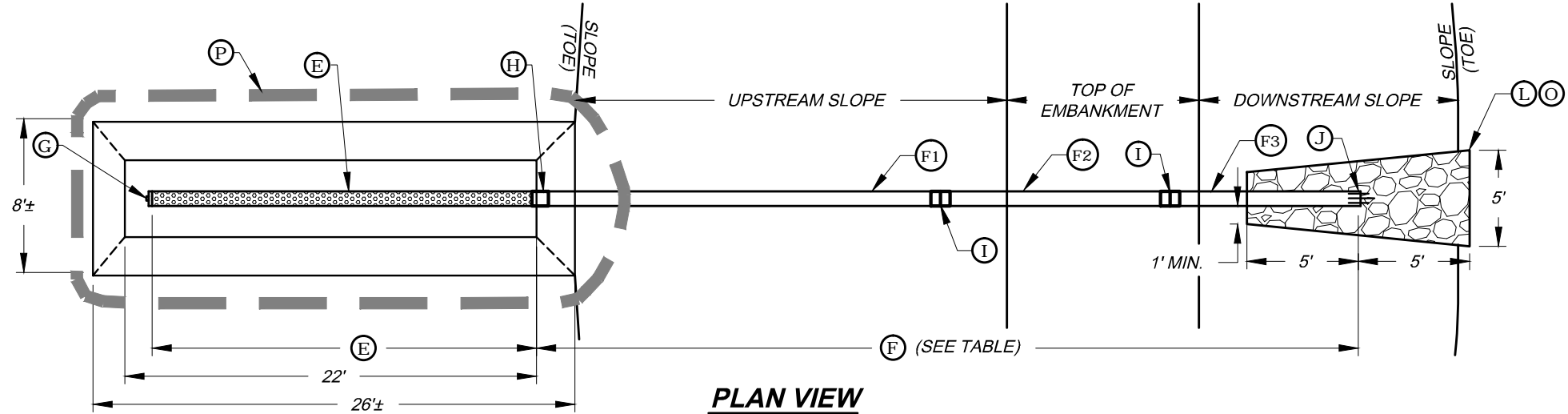
- PIPE:
- THE HDPE DRAIN PIPE SHALL BE PERFORATED PER MANUFACTURE'S SPECIFICATION.
 - THE HDPE OUTLET PIPE SHALL BE NON-PERFORATED PLAIN END PIPE.
 - ALL PIPE JOINTS SHALL BE FIRMLY SECURED WITH COUPLERS, TILE TAPE, AND PIPE STRAPS TO PREVENT PIPE SEPARATION DURING BACKFILLING. PIPE STRAPS ARE AVAILABLE THROUGH AGRI-DRAIN CORPORATION OR APPROVED EQUAL.
 - COUPLERS AND FITTINGS FOR PIPE SHALL BE PER PIPE MANUFACTURE'S SPECIFICATION..
 - COUPLERS, TAPE, AND PIPE STRAPS SHALL BE CONSIDERED INCIDENTAL TO THE PIPE.

DRAIN FIELD:
PLACE GEOTEXTILE FABRIC AND AGGREGATE CAREFULLY TO NOT CONTAMINATE AGGREGATE WITH SOIL.

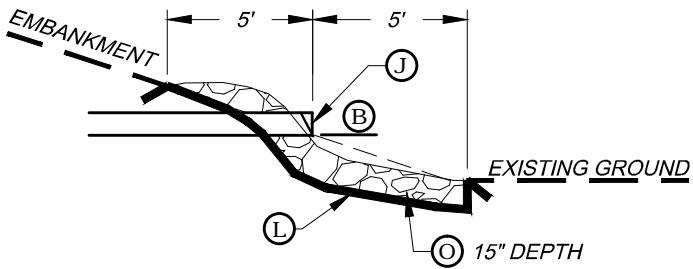
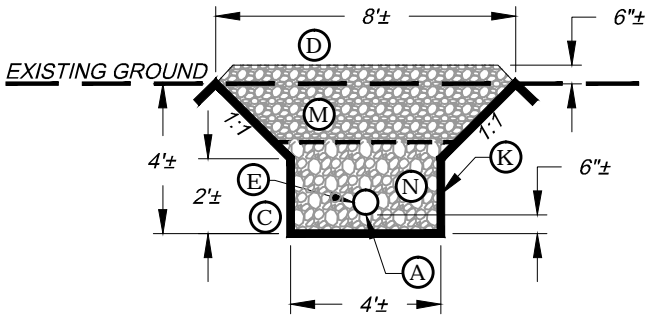
PERIMETER PROTECTION:
THE CONTRACTOR SHALL INSTALL PERIMETER PROTECTION AROUND THE AGGREGATE DRAIN FIELD IMMEDIATELY FOLLOWING INSTALLATION. THE CONTRACTOR MUST INSTALL ADDITIONAL AGGREGATE AROUND THE PERIMETER OF THE DRAIN FIELD A MINIMUM 0.5' ABOVE THE DRAIN FIELD TOP TO PREVENT SEDIMENT FROM ENTERING IN DURING AND AFTER CONSTRUCTION.

ROCK OUTLET:
EITHER ANGULAR OR RANDOM ROCK RIPRAP MAY BE USED AT PIPE OUTLET.

BILL OF MATERIALS		UNIT	QUANTITY
(E)	PERFORATED DUAL WALLED HDPE DRAIN PIPE	LF	20
(F)	NON-PERFORATED DUAL WALLED HDPE OUTLET PIPE	LF	SEE TABLE
(G)	END CAP FOR DRAIN PIPE	EACH	1
(H)	COUPLER OR REDUCER FOR DRAIN PIPE TO OUTLET PIPE CONNECTION	EACH	1
(I)	22.5° BEND FOR OUTLET PIPE	EACH	2
(J)	RODENT GUARD FOR OUTLET PIPE	EACH	1
(K)	MNDOT TYPE III GEOTEXTILE MATERIAL FOR DRAIN FIELD	SY	74
(L)	MNDOT TYPE III GEOTEXTILE MATERIAL FOR OUTLET	SY	16
(M)	WASHED GRADED AGGREGATE FOR DRAIN FIELD	CY	15
(N)	WASHED CLEAR AGGREGATE FOR DRAIN FIELD	CY	10
(O)	MNDOT CLASS II ROCK RIP RAP FOR OUTLET	CY	3
(P)	PERIMETER PROTECTION AROUND DRAIN FIELD	LF	90



ROCK GRADATION TABLE		
ROCK DIAMETER (INCHES)		PERCENT OF TOTAL SIZE SMALLER THAN A GIVEN SIZE (%)
(M)	2 - 4	71-100
	5/8 - 1/2	16-70
	3/8 - 1/4	3-15
	#4	0-2
(N)	1	26-100
	3/4	0-25



I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME :
SIGNATURE :
LICENSE # :
DATE :

WETLAND RESTORATION PLAN	
TRICKLE DRAIN DETAIL SHEET	
APPROVED BY:	DATE :
PROJECT #:	
COUNTY :	PLAN SHEET OF
STANDARD SHEET # BWSR-109A	